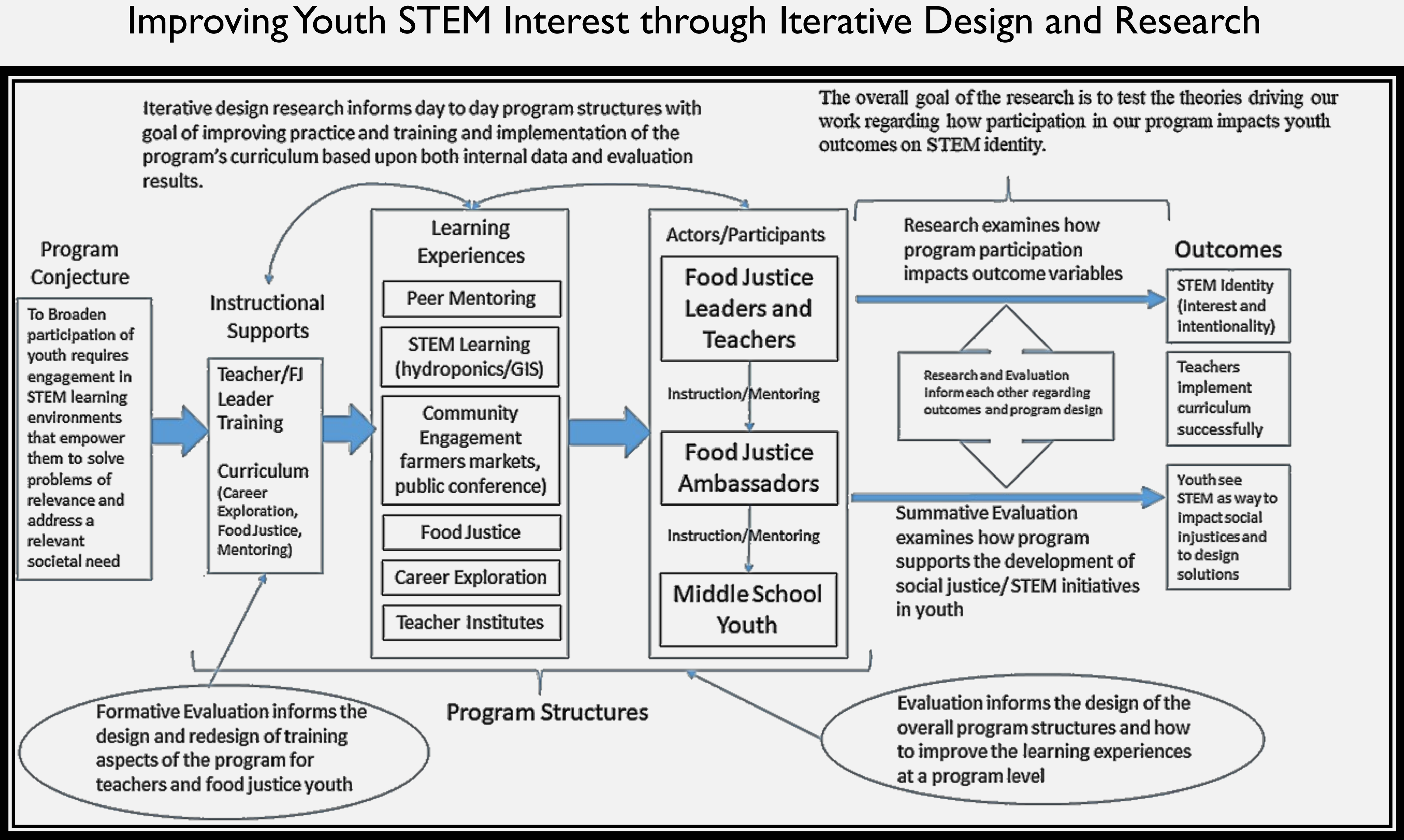


Michael Barnett\*, Helen Zhang, Rajeev Rupani, David Blustein, Belle Liang, Catherine Wong , *Boston College* (\*primary contact: [barnetge@bc.edu](mailto:barnetge@bc.edu))  
Jacqueline DeLisi, Educational Development Center (evaluator)

Goals and Purpose

- Broaden participation in the sciences
- Re-engage youth who may have decided that science is not for them
- Cultivate a youth-empowered pathway for STEM career exploration
- Create youth *change makers* who use their scientific skills for social justice
- Design and implement a near-peer mentoring program with alumni
- Develop youth leadership
- Train 60 Food Justice Ambassadors who will train 600-800 middle school youth and establish 14 new large scale urban hydroponic farms across the cities of Boston, Waltham, and Springfield



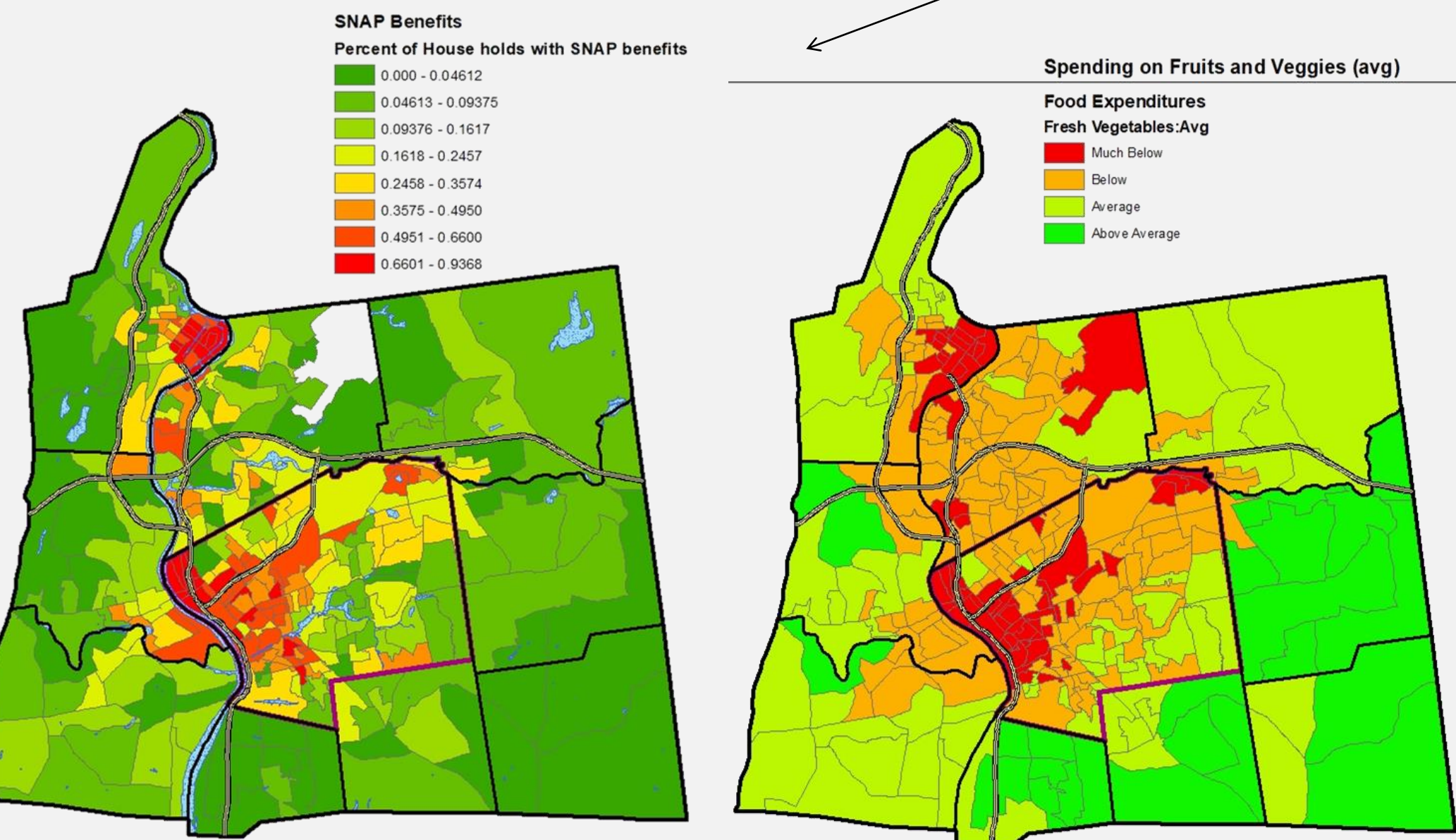
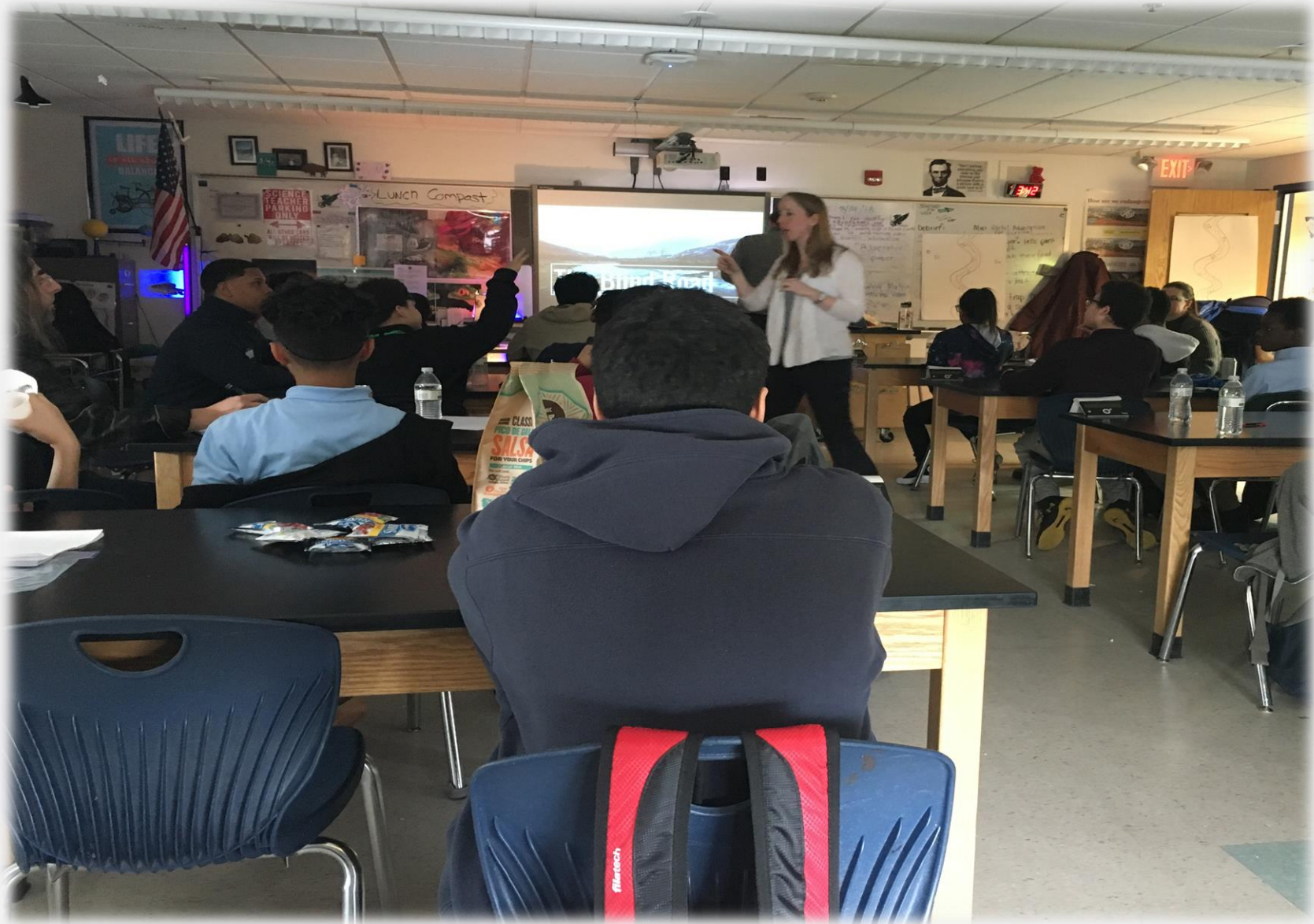
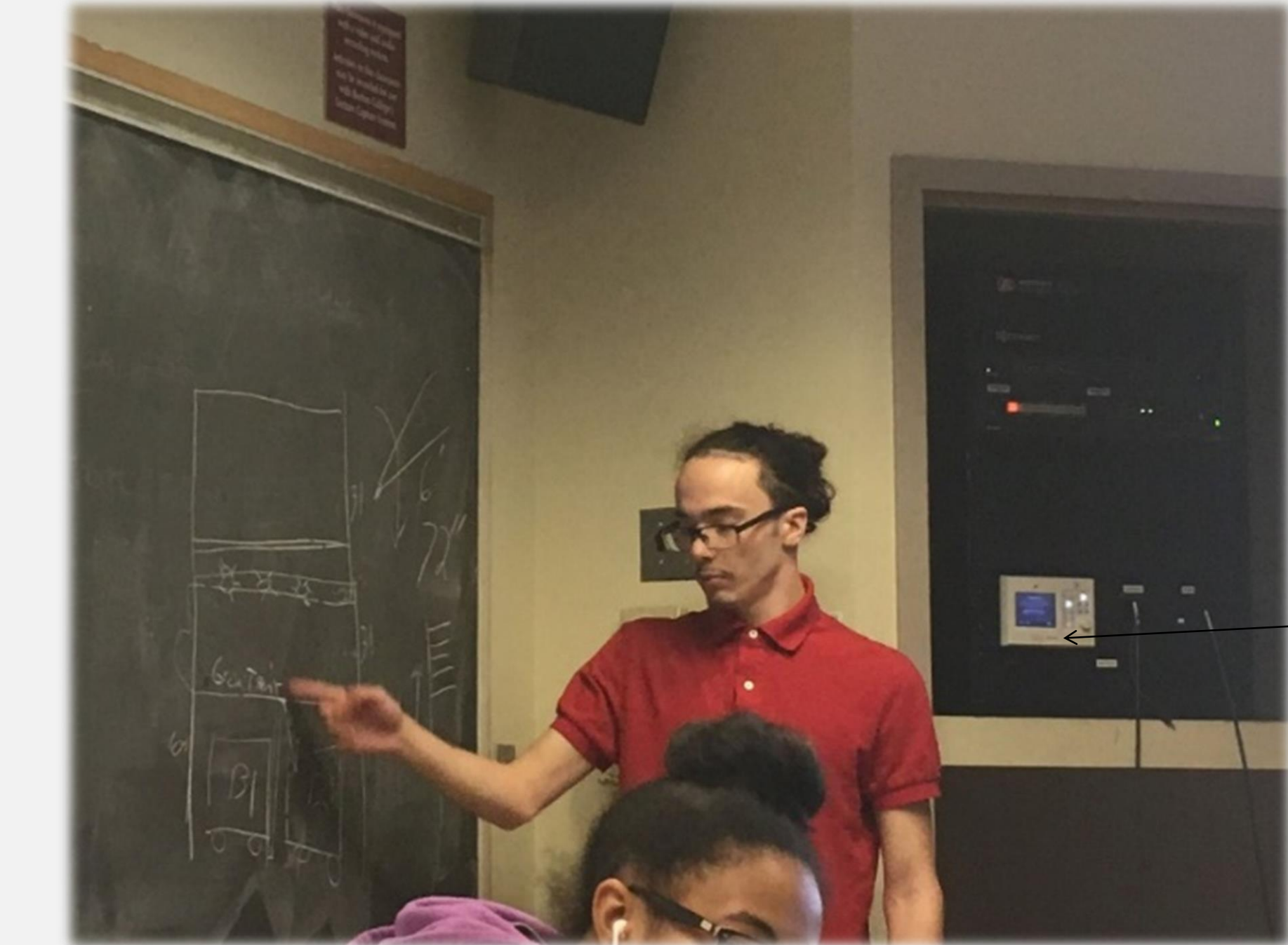
Goals and Expected Outcomes for Youth

- More likely to be **engaged**, to take more **initiative**, to remain **attentive** longer, and to **concentrate** at higher levels, and become **greater agents** of social change, enhanced interest in science
- By “centering a social justice lens in STEM learning” we “increase authentic engagement and motivation to pursue STEM careers” (Madden et al., 2017).
- Youth report they are more likely to **persist** in solving problems (Zhang & Barnett, 2014)
- At least two years, and generally three years, to re-opt into STEM
- Establish a Food Justice strand at the Massachusetts Urban Agriculture Conference

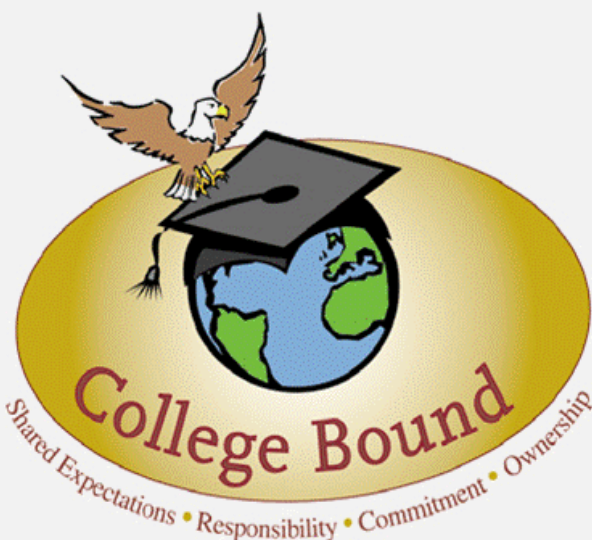


Learning Experiences for Youth

- Design and build **hydroponic systems**
- Learn to design systems and **teach middle school youth** to use them
- Learn the **science of hydroponics** and design new systems
- Conduct **Geospatial Analysis** of where to establish markets or distribute produce and identify food insecurity areas
- Learn to build and code **automatic monitoring systems** using open-source computing to support in caring for their systems
- Contribute to an **urban cookbook** and **conduct foodscapes** of their neighborhoods



SNAP Benefits (%) Fruit+Veggie Spending (\$)  
Example: Springfield (MA) area



References:

Madden, P. E., Wong, C., Vera Cruz, A. C., Olle, C. D., & Barnett, M. (2017). Social Justice Driven STEM Learning (STEMJ): A Curricular Framework for Teaching STEM in a Social Justice Driven, Urban, College Access Program. *Catalyst: A Social Justice Forum*, 7(1). Retrieved from <http://trace.tennessee.edu/catalyst/>

Zhang, L., & Barnett, M. (2014). How high school students envision their STEM career pathways. *Cultural Studies of Science Education*, 1-20

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